

Appl. No. 10/567,571
Amdt. dated May 1, 2009
Reply to Final Office action of March 23, 2009

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-7. (Canceled)

8. (Previously presented) In a fuel injection device for an internal combustion engine with direct fuel injection, the injection device having first and second valve elements, of which the first valve element has a pressure face acting in the opening direction, which defines a pressure chamber, and an actuating device acting in the closing direction, and of which the second valve element is coaxially disposed in a longitudinal bore provided in the first valve element and has a hydraulic control face, acting in the closing direction, which defines a hydraulic control chamber that communicates at least from time to time with a high-pressure connection, and an actuating device acting in the opening direction, and having a control valve, which can connect the control chamber with a low-pressure connection, the improvement wherein the injector device comprising an additional valve device, which in a first terminal position connects the pressure chamber with only the low-pressure connection and connects the control chamber only with the high-pressure connection, in a second terminal position connects the pressure chamber at least predominantly with the high-pressure connection and substantially disconnects at least one region of the control chamber

from the high-pressure connection, and in an intermediate position connects the pressure chamber at least predominantly with the high-pressure connection and also connects the control chamber with the high-pressure connection.

9. (Previously presented) The fuel injection device as defined by claim 8, wherein the additional valve device comprises a cylindrical switch body that has a first valve edge which disconnects the pressure chamber from the low-pressure connection; a second valve edge which connects the pressure chamber with the high-pressure connection; and a hydraulic control face which defines, at least in part, the hydraulic control chamber.

10. (Currently amended) ~~The fuel injection device as defined by claim 9~~ In a fuel injection device for an internal combustion engine with direct fuel injection, the injection device having first and second valve elements, of which the first valve element has a pressure face acting in the opening direction, which defines a pressure chamber, and an actuating device acting in the closing direction, and of which the second valve element is coaxially disposed in a longitudinal bore provided in the first valve element and has a hydraulic control face, acting in the closing direction, which defines a hydraulic control chamber that communicates at least from time to time with a high-pressure connection, and an actuating device acting in the opening direction, and having a control valve, which can connect the control chamber with a low-pressure connection, the improvement wherein the injector device comprising an additional

valve device, which in a first terminal position connects the pressure chamber with only the low-pressure connection and connects the control chamber only with the high-pressure connection, in a second terminal position connects the pressure chamber at least predominantly with the high-pressure connection and substantially disconnects at least one region of the control chamber from the high-pressure connection, and in an intermediate position connects the pressure chamber at least predominantly with the high-pressure connection and also connects the control chamber with the high-pressure connection, wherein the additional valve device comprises a cylindrical switch body that has a first valve edge which disconnects the pressure chamber from the low-pressure connection; a second valve edge which connects the pressure chamber with the high-pressure connection; and a hydraulic control face which defines, at least in part, the hydraulic control chamber, and further comprising a fluid conduit which at least from time to time connects the high-pressure connection with the control chamber is embodied in the cylindrical switch body.

11. (Previously presented) The fuel injection device as defined by claim 10, wherein the fluid conduit comprises a flow throttle restriction.

12. (Previously presented) The fuel injection device as defined by claim 10, further comprising a sealing portion on an axial boundary face of the control chamber at which the cylindrical switch body comes to rest in the second terminal position, and which, in this

second terminal position of the cylindrical switch body, the cylindrical switch body and the sealing portion divide the control chamber into the at least one region which is substantially disconnected from the high-pressure connection and a second region that communicates with the fluid conduit and wherein the at least one region is defined, at least in part, by the hydraulic control face of the second valve element.

13. **(Previously presented)** The fuel injection device as defined by claim 11, further comprising a sealing portion on an axial boundary face of the control chamber at which the cylindrical switch body comes to rest in the second terminal position, and which, in this second terminal position of the cylindrical switch body, the cylindrical switch body and the sealing portion divide the control chamber into the at least one region which is substantially disconnected from the high-pressure connection and a second region that communicates with the fluid conduit and wherein the at least one region is defined, at least in part, by the hydraulic control face of the second valve element.

Claims 14-19. **(Canceled)**

20. **(Currently amended)** ~~The fuel injection device as defined by claim 9~~ In a fuel injection device for an internal combustion engine with direct fuel injection, the injection device having first and second valve elements, of which the first valve element has a pressure face acting in the opening direction, which defines a pressure chamber,

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and an actuating device acting in the closing direction, and of which the second valve element is coaxially disposed in a longitudinal bore provided in the first valve element and has a hydraulic control face, acting in the closing direction, which defines a hydraulic control chamber that communicates at least from time to time with a high-pressure connection, and an actuating device acting in the opening direction, and having a control valve, which can connect the control chamber with a low-pressure connection, the improvement wherein the injector device comprising an additional valve device, which in a first terminal position connects the pressure chamber with only the low-pressure connection and connects the control chamber only with the high-pressure connection, in a second terminal position connects the pressure chamber at least predominantly with the high-pressure connection and substantially disconnects at least one region of the control chamber from the high-pressure connection, and in an intermediate position connects the pressure chamber at least predominantly with the high-pressure connection and also connects the control chamber with the high-pressure connection, wherein the additional valve device comprises a cylindrical switch body that has a first valve edge which disconnects the pressure chamber from the low-pressure connection; a second valve edge which connects the pressure chamber with the high-pressure connection; and a hydraulic control face which defines, at least in part, the hydraulic control chamber, and wherein the cylindrical switch body comprises a central through opening, in which one portion of the second valve element is guided.

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21. **(Previously presented)** The fuel injection device as defined by claim 10, wherein the cylindrical switch body comprises a central through opening, in which one portion of the second valve element is guided.

22. **(Previously presented)** The fuel injection device as defined by claim 11, wherein the cylindrical switch body comprises a central through opening, in which one portion of the second valve element is guided.

23. **(Previously presented)** The fuel injection device as defined by claim 12, wherein the cylindrical switch body comprises a central through opening, in which one portion of the second valve element is guided.

24. **(Previously presented)** The fuel injection device as defined by claim 13, wherein the cylindrical switch body comprises a central through opening, in which one portion of the second valve element is guided.

Claims 25-27. **(Canceled)**